

AN *IN VITRO* SYSTEM FOR DETERMINING  
FORMATION OF A $\beta$  AMYLOID

ABSTRACT OF THE DISCLOSURE

The invention relates to rapid methods for determining formation of A $\beta$  amyloid and screening compounds which inhibit formation of A $\beta$  amyloid *in vitro*, as well as kits for carrying out the present methods. Such an agent used *in vivo* may prevent, ameliorate or reverse the symptoms of Alzheimer's disease and A $\beta$  amyloidotic disorders related to Alzheimer's disease, Down's syndrome, and Guamanian amyotrophic lateral sclerosis/Parkinson's dementia complex. The process described in this invention involves the rapid induction of A $\beta$  amyloid by a heavy metal cation capable of binding to a polypeptide comprising at least amino acids 6 to 28 of A $\beta$ , such as zinc to form amyloid and determination of formation of tinctorial A $\beta$  amyloid. Moreover, a method of determining effectiveness of a candidate anti-amyloidotic agent for prevention or treatment of A $\beta$  amyloidosis is described which uses cell cultures which express at least a human A $\beta$  peptide.